

# SINCUS NEWS

VOLUME III  
NO. 7  
SEPT/OCT 1985

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sinclair computer users society  
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## Secretary's Report

This report will cover the meetings of the months of July, August and September 1985. Due to current changes of jobs with in the society, most recent news first.

Gary Ennis, President and *SINCUS NEWS* editor, announced his decision to step down as editor of *SINCUS NEWS* effective immediately, due to increased pressures of business in his new position as manager of Computer Done at the Oakdale Mall. At the September 18 *SINCUS* meeting, no volunteers for the position came forward, so yours truly will try to maintain the newsletter, in addition to society Secretary. I am happy to report to all members that the society is alive and well, and that the newsletter while late will still go out, as long as several other very busy members help me with the typing and other odds and ends of printing a newsletter.

The September meeting was quite interesting as Wes Brzozowski brought forth his latest creation on back up copy makers-more to follow in the next couple of months on this.

We had a guest in our mists, Steve Berg, from the North Florida T/S Users Group and he had much to tell and fill us in on how their group functions and much in the way of informed opinions on the disc drive systems available and monitors. We need this personal contact between user groups, so much more can be learned than thru the newsletters and modems.

Meeting dates and locations for the rest of this year and next-- Vestal Public Library, 3rd Wednesday of each month--  
EXCEPT--February and March 1986--the 2nd Wednesday of each month--  
7 p- come early-

George Penney is now Treasurer, Glen Wilson is returning to school. Glenn did a great job for the past two years, Thanks Glen...enjoy the newsletter on us.

Back issues-a project near and dear to my headache. Thanks to Carl Morris, Scot Eddy and my wife, we now have the back issues about 95% on tape. We aren't a business, so anyone who wants back issues, we'd appreciate a donation of \$12 or more. With this issue we are beginning to reprint articles from early issues of *SINCUS NEWS*.

The 1000 users can unite with Don Lanen for projects or classes relating to the 1000 computer.

A party for the November meeting (pizza and coke) is planned for the ringing in of our fourth year.

COMPUTER DONE, Gary's place, got its first EMC 2068 with the disc drives, I tried them, they are fast-anything is fast when all you got is the old cassette recorder-problem I ran into is having to read the book first!! Fast-quiet- and about two months of spare time to learn this. Gary also reports the effect of plugging in the wrong power supply-the smell of very hot resistors-and a very small puff of smoke. When the FIRST EMC -Portugal-computer in the Triple Cities is repaired, we then may get a glimpse of it. Apparently Gary started something, as very soon after the EMC smoke, Wes blew his 2040 printer and IF1 and 2068 with a slight alignment problem on the edge connector. Wes reports all ok. Well as soon as the IF1 replacement arrives from England.

We are going to extend newsletter subscriptions until October for local members, and two months to corresponding members to in some way make up for the lag in newsletter output this summer. I anticipate an increase in dues as of the first of the year. We are publishing at just over cost, and at this rate the money wont go too far. The ads or lack of them is generally the problem, one ad a month could keep us in the black. I am going to generate the letter in this format, unless I get a lot of feed back with violently expressed opinion to the contrary. As for the ads, see back page for ad sizes and rates.

All correspondence for the society newsletter or membership swaps, renewal, ads, etc: *SINCUS NEWS*

PO Box 36

Johnson City, NY 13790

Gary's address is still PO Box 523, Owego, NY 13827, and if you want to contact the *SINCUS* President, you write 'em.  
Paul Hill, *SINCUS*

## NEWS and VIEWS

We got a sample issue of *ZI Computing*, April/May 1985 and an offer about 10 of us couldn't refuse. If you are interested in this publication- 6 a year for 198, 25% off with orders of 10 subscriptions. - it has much on the Spectrum and the Z181. split about 60/40 in the Spectrums favor. Around 120 pages in the sample issue. Write to:

ZI Computing Export Offer  
Argus Specialist Publications Ltd  
No 1, Golden Square  
London  
W1R 3AB

*LIST*, May/June 1985 issue arrived and was full of many interesting articles, one article and a couple diagrams by our Wes Brzozowski. N. A. Pashtoon had a preview of the Portugal TC2068 and the Disk Drives. Mr. Pashtoon has given very favorable reviews of the newest addition to the Sinclair family of computers out of Timex. It is very apparent that both the new 2068 and the disk drives lend a new lease on life for Sinclair computer die hards. As Mr. Pashtoon's article is very long, I'll only replay a few remarks: "... TP's disk drives work beautifully with the TS2068 and without an emulator ! ( you do need a TWISTOR )...when *TIMEI* -USA closed its computer division the Portugese government took over the factory and operations in Portugal with the intent of continuing the production of the TS2068 for the Portugese market ...*TIMEI*-P is setting up headquarters in Connecticut for its US operations...the sound coming out of the machine is much louder than your TS2068...as far as software is concerned the TC2068 and the TS2068 are the same...the ambitious plans of *TIMEI*-USA for the Bank expansion unit are probably thrown out (I hope I am wrong!)...I connected the Interface 1 and the Microdrives directly to the machine (TC2068). The microdrives worked flawlessly and without any hitches...is the TC2068 is the best of two worlds of Spectrum and TS2068? for the general user, a definite YES! Current price of \$159, you get a 2068, emulator, a Spectrum bus, and a sync stripper. THE DISK DRIVES...3" Hitachi disk drive...system is easier to use than the microdrives and will not intimidate beginners. For advanced users the system is a treat...Random and sequential addressing of files is possible. ..the demo disk has a BACKUP, LOSYS, DUMF and LPRINT utilities.. this system operates on exactly the same principle that Sinclair's I/F 1 and Microdrives use...Also *TIMEI*-P's future plans can be surmised from the mention of CF/M on the box...the card is either already available or might be in the releasing stage....I found the workmanship and quality of construction on these units of highest Caliber...If you can scrouge the money, by recommendation is to BUY THE COMPLETE SYSTEM!

To date, SUNWARE, ZEBRA, and English Micro Connection have advertised the TC2068 and the disk drives, but as of this date have not yet passed FCC regs.

From Charlie Day "QL Watch" "Where's the QL?"; this is the same question I've been asking for the last few months. If you call Sinclair they will tell you that they are still waiting for FCC approval. They have been telling me that since November. So, where's the QL? The QL has been back on the drawing board. The US version of the QL will incorporate the improvements of the latest English QL.

Some of the improvements in the latest run of QL's include an upgrade of the 32K ROM to 48K ROM. The maximum size for a ROM cartridge has been changed from 32K to 16K.(sic) There have also been improvements on the QL's editor and SuperBASIC. The speed of the microdrives have been improved by ironing out Qdos.

The US version of the QL will have version 2.00 of the PSION software included with the machine. The 2.00 version is written in the QL's native machine code instead of cross-compiled, which version 1.00 was. This improvement has led to the programs running much faster and loading in half the time version 1.00 needed to load from microdrives. All of the help menus are loaded into memory at the time of initial loading, so the programs are not slowed down by having to address the microdrives to obtain the help menus. This makes it even more remarkable that there is now more memory space to work with in each program-almost twice as much. The programs are now much easier to use, but are still very, very powerful. They also make provision for floppydisc and different printer interfaces.

There are many new add-ons for the QL under development or already available to the public. Two to be looking for in the near future are are Sinclair's .5 MB wafer scale memory chip. The chip will be a "Silicon Winchester". They will be very quick, so quick that you will be able to call up screens saved in the memory to produce animation. The unit will be able to be used as a RAM disk and will have battery backup. It will draw it's power from the QL, and the chip will recharge when the QL is on. The price-around \$200. The next package to be on the look out for is QCOM, a very nice modem with a few extras from OEL. The interface will have a communications interface that allows the QL to act as a VT100 terminal, auto dial/answer and the modem that can operate from rates of 75 to 9600 baud. QCOM will have a customized computer on a chip that will sit at the heart of the communication package.

How about the promised add-ons in the Sinclair brochure? The IEEE-488 interface is already being sold. Several very nice floppy disk interfaces are being sold, and parallel printer I/Fs are everywhere. You can find just about any language for the QL you could want, and there are several operating systems available.

About the only changes in the American and British version is Sinclair has changed the serial port connectors to a standard 25 pin and joystick ports to the standard Atari type. The power on light is yellow instead of red, and it has been rumored that a composite video port might be added.

If you are looking for some books on the QL or you would like to see a list of English magazines and English add-ons and programs already available I suggest you write Curry Computer-5344 W. Banff, Glendale AR 85306. Be sure to tell them where you heard about them. Keep on the watch, the mighty QL is coming.

Thanks to Charlie Day for the QL info!

What's new?

As early as 1882, an artist pictured a woman shopping via Television, and another taking a course via TV. This six years after the invention of the telephone.

In 1922, a former Secretary of the Navy, J. Daniels stated that with the invention of radio, "Nobody now fears that a Japanese fleet could deal an unexpected blow on our Pacific possessions"

Anyone want to predict what life holds a 100 years from now?

One sure bet is that computers will be a force or field as revolutionary as fire or the printing press.

User group ATSU, Columbus, Ohio had an article written by a software vendor on why one shouldn't pirate software. I read the article with some interest and would like to put out the following observations and thoughts I've heard from other users.

>>>>Thoughts on copying software<<<<

I copy software because

....it generally isn't any good.

....I want to see it first-see if it works, see if it is worth it. Pay for it? Me?

....the first couple I brought weren't worth a damn, so I'm getting even.

....I could of wrote a better program in 10 minutes, or I would have to modify this to work for me.

....the claims of the software writer are written better than the software.

....the graphics on the package are like night and day compared with the actual program graphics.

....it's so user friendly, I thought I'd take a copy home with me.

....most software is copied from public domain and repackaged as new...LUNAR landers, LIFE and several other early games had been copied with out shame and sold as copy righted material!

....it is there, so much of it, so easy to copy, why not?

....it is too expensive, and this is the only way I can afford software.

....half of the documentation is spent on what I can't do with MY purchase in legalise that probably is half the cost-the lawyer charge to write the damn notice.

....it costs more than the damn computer, and it has more bugs than a can of RAID can take care of.

...the company isn't in business any more.

....you can't buy the program anywhere.

....it's only a copy of a borrowed copy on loan from the library.

....it costs so much, they'll never miss this, besides I'd never buy it.

....it has always been this way, someone writes it, some one else copies it and sells it, a big software house buys the rights, gets fancy ads in all the mags six months before it is available, someone then buys it, and makes copies for all his friends, who in turn all write for the missing documentation!

Pirates will be with us until it is cheaper, or easier to buy the original material than to copy. Passing laws to control the pirates will be as effective as the Prohibition Laws. Cost and difficulty of copying are the practical ways to control pirated material. To expect the morality of the population to control itself from doing no wrong is to expect yourself from never doing wrong, ever, no cheating, speeding, lying or shorting the IRS!

Programmers are going to have to get down one on one with the customers, spend time with the end user and see how their product is used. Too often one has to modify his way of doing business to make use of the software, rather than the other way around. Of course this isnt for home users, but the writers for home users should come outa the ivory towers and take a closer look at what the hell is on the market and what is any good for the average user. 80% of the programs on the market for the home user is CRAP!! Most of the games are more interesting for the programmer than the user. The games that are closest to real life-simulation games are probably the best. Word processing and simple spread sheets and filing programs are the only keys to accessing the real potential of the computer.

Pirates and programmers, cops and robbers, good and bad, this is the real world, you can't write laws which will make people want to do right. Programmers have to write worthwhile material, manufacturers have to back up their merchandise and neither should feel that each sale should repay their college tuition. Pirates wont disappear over night, but the compulsion to get back at poor, expensive programs should diminish.

The thrust of software companies is to thwart the user's rights, now they are getting laws passed to restrict the buyer from reselling the software when the buyer wants to. The buyer is restricted from how when and where he uses the programs, he can not modify the program to fit his business or even read the program (the internal code). The buyer has to rely on advertising to get a rough idea of what the program does, look for a review written by an unknown person to get an opinion, look in software shops for a tryout and still buy in the dark an item he doesnt have the right to resell!?!?

Of course, the programmers should be paid for their efforts, and all should make a reasonable profit, from all those who use their product, but quit trying to off the public, quit putting out half baked junk, quit paying lawyers to write half the documentation. And to users, if you copy, and use it, pay for it. If you try it and dont use it, destroy it. The copier should pay 50% retail to the publisher and then be registered as a legit owner. The distributor saves, the user saves and the programmer gets paid!

A VCR tape of the program could give a better picture of whats inside the fancy packaging. A clear cut- no frills description of what to expect from the program and a guarantee that it will do so, should help in cutting down the feeling of buying the unknown, to perform God knows what, at a price that that will keep you on a meatloaf diet for years to come.

Most likely you won't be caught illegally coping a program and this doesn't make it right, wrong is wrong. The effect is to keep a retailer and a programmer from making an honest buck. The long term effect is to put people out of business and keep others from entering the field. But what is wrong with making the backup copies?? Nobody is going to keep me from doing that! And as long as I spend the green for the programs, I'll resell the original for whatever the market will bring. And the shrink-wrapper will long be in the trash!!

Personally I enjoy sharing any programming I write with others as I'm not a professional programmer, I like copying other's efforts to debug or modify and give credit to them as I hope they would to mine. That is part of the enjoyment I get from this hobby of personal computing. My views are that of a non-pro, and non-business user, hobby-loving Sinclair computer lover since my ZX81 kit arrived back in Feb of 1982. I have bought, used and been highly disappointed by what can be brought, and have been extremely happy with a few others- but I am leery about buying sight unseen.

the John Oliger Co, 11601 Whidbey Dr, Cumberland, IN 46229 send a SASE for current catalog of TS1000 and 2068 products. I had a mailing from John which I passed around at the meeting and never saw again. I dont know of any local member doing business with John but all the other UGs have high praise for his products and they are very reasonable price wise.

The T/S Connection writes..."we are NOT and have never been an authorized service facility of the Timex corporation". Carver Technologies a divison of the T/S Connection does do TS computer repairs- if interested write The T/S Connection  
3832 Watterson Ave.  
Cincinnati, Ohio 45227

NEW-to us anyway! QZX, 2025 O'Donnell Drive, Las Cruces, NM 88001 for all interested in amateur radio and Sinclair computers Send a SASE for info!

NEW- ARTWORX-\$19.95 + s&h from RAMEX Intl. 48345 Van Dyke, Utica MI 48087- !!! this is the tasword of art/draw programs- I gotta peek at this one and it is a 9.9 out of 10. Done in MC, a separate page for menus, you use a joystick and keys. After using this program for two hours I couldn't believe all you can do with this program. There are limitations- after all 48k is 48k not 256K- these people vent the max on this artwork program. Followed by GALLERY which allows you to run five pages of artwork in a simple animation form. If you have some art ability and you invest some time with this you can learn to use it to great effect. I modestly include a drawing which may or may not get printed. This is fun and useful-get it, already!  
ARTWORX was by David Ridge, NOVELSOFIT, 106 7th St. Toronto, Ontario, Canada M8V 3B4

Vancouver User Group was heard from this month, a copy of their newsletter in the newsletter file. They have interesting articles and a couple listings. You gotta read the "Just Plain Old Weird Stuff" from the Twilight Zone BBS. Almost worth getting a modem just to read selective items of interest to those use the telephone lines at 3am.

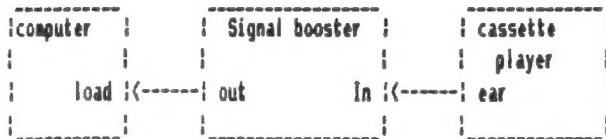
SUNSET ELECTRONICS, 2254 Taraval Street, San Francisco CA 94116 sent us a pile of paper of their wares for sale- I found a book I've been looking for, (Stan L. Too)\*TS2068 Basic and Beyond" by Sharon Aker, for \$9.95 plus \$3 Shipping. They got LOTS, write for their catalog, the list of programs on EPROMS looks very reasonable!

From corresponding member, Ian Robertson, Sinc-LINK, Toronto, Canada-some excerpts from his August 85 SyncBits column... \*LARKEN ELECTRONICS, R.R.2, NAVAM, Ontario K0A 2S0, Canada, has a very reasonably priced and well assembled controller board complete with cables and connectors for \$89.95 (US) plus shipping. The IF is compatible with the TS2068 and the Spectrum Emulator. It supports one Shuggart SA455 DSSD drive (160K)(about \$90). DOS is on a 2K EPROM and a disc. Improvements in the works....new SPECTRUM programs that have simply blown my mind: BETA BASIC 3.0, MEGA BASIC, BLAST, SUPERCODE 3, MUSIC Typewriter and Alien 8. All from Bob Dyl at EMC, 15 Kilburn Court, Newport, RI, 02840....WARNING...if you buy tapes from the UK, make sure to copy it immediately upon receipt. I have had four tapes that either bind inside the case or break off inside due to binding. To make matters worse, UK cassettes do not have screws. Therefore you cannot take them apart and lubricate the rollers like with North American cassettes. To add yet another insult to injury I have had several UK tapes that are of such a low bias that they do not have adequate volume to load consistantly. This is where the Radio Shack mini amplifier helps [see Hal Sohn's article]....TS1000...Peter McMullen's WordSinc II.5 and Word font VI.2 are finished and released-\$30(US II.5) and \$5 (w/ VI.2), write 2340 Queen Street East Toronto, Ontario M4E 1G9. I have used both programs and consider them comparable to using Mscript and Tasword together-if that were possible!...Write to John Oliger, 11601 Whidbey Dr, Cumberland, IN 46229 about the John Oliger Video upgrade board for the TS1000-turn the old TS1000 into a flicker free color computer with upper and lower case and a SLOW mode that is almost as FAST as FAST!! dont forget a SASE!



The signal booster consists of one miniature audio transformer. The transformer is used as an interface between the computer and the cassette player.

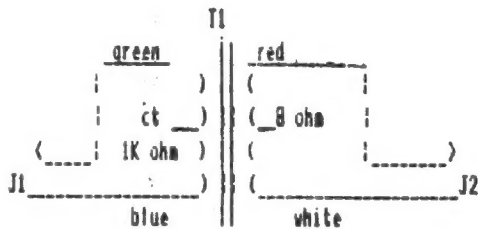
Example:



The signal booster has the following advantages:

1. Isolates the computer from the cassette player which eliminates noise.
2. Increases the audio signal amplitude.
3. Cassette player volume setting can be adjusted to a lower level, thus improving the signal/noise ratio, this lower level setting decreases the inherent noise caused by high level of volume setting of volume control of most cassette players.
4. Increased signal amplitude, allows for misalignment of the record/playback head, which causes low signal amplitude.
5. No power required.
6. LOW COST

SCHEMATIC:



CONSTRUCTION

1. Drill two # .250 (1/4 inch) holes in a plastic pill bottle, one thru the cap, and the other thru the bottle bottom.
2. Solder transformer leads to jacks(J1) and (J2) as per schematic, then insert into plastic bottle.

*note: Don't use a metal container, the metal prevents the proper isolation and grounding between the computer and the cassette player.*

Parts list

- T1-1K CT. to 8 ohms-Radio shack (273-1380)
- J1 - J2 Radio shack (274-297)
- Plastic pill bottle to fit transformer

When using signal booster use a lower volume setting for best results.

FOR SALE                      FOR SALE  
 For the TS 1000- Memotech Centronics  
 Interface w/cable..\$70. Memotech HRG  
 interface..\$60. Both in original boxes  
 Call 212 535-1651 or 516 365-8737

REVIEWS- Night Gunner and Fighter Pilot

While Roy was there, at the May SINCUS meet, I saw Night Gunner for the first time and was fairly well impressed, enough to buy the program. "Night Gunner", by R J Swift, Digital Intergration, sold by Knighted Computers, for \$19.95 plus NYS sales tax. I keep saying I dont like games, well maybe I'm finding some I do like, and the two I brought the other night are a couple real grass grovers. In Night Gunner, you are defending a bomber from swarms of fighters on your way to target and on the way home. With either a joystick or keyboard control you can move the bulls eye around the screen and see the rounds you fire arc towards the bulls eye. When you hit an attacker it becomes a puff of smoke. A "HIT" sign lights up when you are hit, and the condition of the plane is updated on the bottom of the screen. All in all the attacking planes are very well done, both in size, shape and motion. A good RGB monitor would really do it up proud and you might get more out of it. Joysticks make the game more enjoyable, but you need a good one, as it will really get a workout with this program. I'd rate this a 10 except for one thing the NOISE, the sound effects are okay, except for the little diddie at the end of each mission. If only there was a way to turn it off, also the crashes are a bit much, well I'd give it a 9.

I dont know where other folks get their rating scales from, but I figured mine out like this. Remember I said these were real grass grovers, well I go out an measure the grass in three locations in the yard, average them out. This is of course before I mow. Well if the games are so good as to keep me off the lawn mower for a few days, then how deep the lawn is, is a good indication of how good the game is. In winter, I measure the snow in the driveway. If the wife is away for a while then to be fair, I divide the average by 2. So if you drive by my place and the grass is higher than the mail box, stop in, cause I got a GREAT one!

The second program, Figher Pilot, by D K Marshall, Digital Intergration, from Knighted Computers, for \$21.95 is another 9!! Why you may ask only a 9. Because there is no sound at all. Not a peep, and this is the only drawback. If you've read the ads on this its all there. Very close to Flight Simulator, only FASTER. You can fly loops, rolls, stall, and you can try to land it. I have had the pleasure of seeing this several times before buying it, and have wanted to buy it sooner. It is a challenge to fly the plane and land it, let alone enter the combat phase. The only way I can SEE the enemy plane is to go to the practice mode and then it is only a glimpse. If you have two joysticks, one on the right controls the rudder and stick, the other thrust and rudder controls. I've only one stick and it is pretty good, if you turn the lights off, and just watch the screen- here again a RGB monitor would really pay off, to see the warning lights, and read the details better. This is worth it. I just played it again and finally "smoked" the enemy, but then crashed trying to land it! I've described this game to others unfortunatly enough not to own a Sinclair 2068, and you should see them drool at the graphic capabilities of this "little itty bitty" less than \$200 machine! I wonder if they go home and kick their PC.

Both of the above programs were converted to run on the TS2068 by the folks at Knighted Computers, 707 Highland St., Fulton, NY 13069. Write em for a catalog. Tell them SINCUS sent you.

This little program prints out the ICs upside down with pin call  
outs, I wish I had used it when I built my centronic interface.

```

9900 REM "renumber"
      John Sims
      SINCUS
      P.O. Box 36
      Johnson City, NY 13790
9901 INPUT "First line to renum
ber "f": IF f<1 THEN GO TO 9902
9902 INPUT "Last line to renumb
er "e": IF (e<f) OR e>9999 THEN
GO TO 9903
9903 INPUT "New number for ""f""
":r: IF r<1 THEN GO TO 9903
9904 INPUT "step "s": IF s<1 THE
N GO TO 9904
9905 LET p=PEEK 23635+256*PEEK 2
3636: LET v=PEEK 23637+256*PEEK
23638: PRINT "v=v: p=p: s=s":
PAUSE 120: CLS
9906 LET n=256*PEEK p+PEEK (p+1)
: LET l=PEEK (p+2)+256*PEEK (p+3)
: IF n<f THEN GO TO 9910
9907 IF n>e OR p>v THEN LPRINT
: LLIST: STOP
9908 LET a=PEEK (p+4): IF a=236
OR a=237 THEN LPRINT CHR$ a;TAB
8;n;TAB 16;r
9909 LET p1=INT (r/256): POKE p,
p1: POKE p+1,r-p1*256: LET r=r+s
9910 LET p=p+4+l: GO TO 9905

```

BOB BUSSEY  
33 RUDDER WAY  
NEW FORT RICHEY  
FL 33552

Dear Paul:

At the last meeting I att-  
ended before coming to Fla. I  
was told that it is usually nece  
ssary to remove one of the plugs  
from the tape recorder when LOA  
DING. I also remember that I ha  
ve read this in one of the manua  
ls.

This never was a problem wi  
th me with the SX81 or the 2068  
as long as I used my B&W. When  
I started using a SONY 9 inch, j  
ust lately, I ran into the load  
ing bug I had heard about.

Drawing on past experience in  
audio work, I suspected a ground  
loop problem, for in audio you  
NEVER have more than ONE ground  
path ie: each section is grounde  
d in one spot.

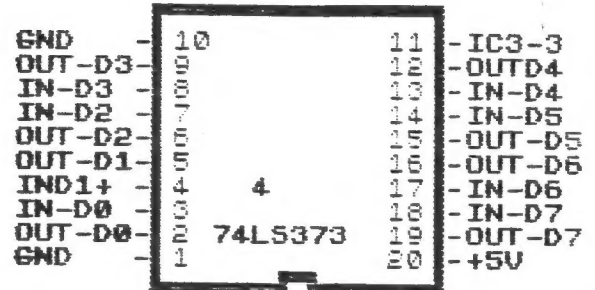
My fix was to open about 1/4  
in of one of the grey wires. Yo  
u peel back the rubber and then  
very gingerly remove the copper  
ground shield for that 1/4in. Be  
very sure not to damage the whi  
te wire then tape. You could do t  
his ANY place in either wire BUT  
ONLY ONE WIRE.

This makes loadig a lot easer  
& less trouble. It works for me  
hope it will for you.

Bob Bussey



## IC ART



```

1 CLEAR 56575
2 FOR a=57786 TO 57814
3 READ b: POKE a,b
4 NEXT a
5 DATA 17,0,221,213,1,0,3,42,
54,92,36,126,167,31,188,18,35,10
,13,32,246,16,244,225,37,34,54,0
2,201
6 LET p=60: LET o=23607: LET
U=57786
9 LET d=4
10 PRINT "how many pins?"
20 INPUT n
30 LET a$=""
39 PRINT AT d-1,7;a$
40 LET b$=""
41 LET r=(n/2+1)
42 DIM d$(7)
43 DIM c$(n,6)
45 FOR l=(n/2) TO 1 STEP -1
50 PRINT AT 21,0:"enter pin #
":l
51 INPUT c$(l)
52 PRINT AT 21,0:"
":l
54 PRINT AT 21,0:"enter pin #
":r: INPUT d$
220 RANDOMIZE USR U: PRINT AT d
,0;c$(l): POKE o,p: PRINT TAB 6
:"-":l;TAB 19;r;TAB 21:"-":r: R
ANDOMIZE USR U: PRINT d$
221 POKE o,p
225 LET d=d+1
230 LET r=r+1: NEXT l
250 RANDOMIZE USR U: PRINT AT d
,7;b$: POKE o,p
270 PRINT AT 21,0:"# of IC
":l
280 INPUT f$
290 RANDOMIZE USR U: PRINT AT d
-4,12;f$: POKE o,p
300 PRINT AT 21,0:"IC code
":l
310 INPUT g$
320 RANDOMIZE USR U: PRINT AT d
-2,10;g$: POKE o,p
900 STOP
901 REM WRITTEN BY P.A.HILL-SIN
CUS 1984-JOHNSON CITY, NY 13790
907 CLEAR
909 SAVE "darkart"

```

\*\*\*REPRINTS\*\*\*

\*\*\*\* THE BRICK WALL \*\*\*\*  
 \*\*\*\* IN YOUR COMPUTER \*\*\*\*

BY WES BRZOZOWSKI

I REALLY HATE THIS DAMN MACHINE  
 I REALLY WISH THEY'D SELL IT.  
 IT NEVER DOES WHAT I WANT  
 BUT ONLY WHAT I TELL IT!!

Graffiti written on  
 university computer

Actually that poem is a bit optimistic. Even when you tell your computer to do something, it may instead do something else. It knows nothing about the decimal numbers we use in BASIC, but instead uses a clever program that gives the illusion that it does. Unfortunately, this program has certain limitations, and can give the wrong answers to some programs. This is not a bug, it's a problem that must occur in every BASIC in every computer. If the BASIC interpreter were well written, we'd rarely, if ever, run into these limits. Also, note that they're different for different model computers, wherever they are, they're like a brick wall that your program can't smash through. The only way to get to the other side is to find a clever way around the obstacle. This month we'll find the wall and do some exercises that will allow us to think about it.

Enter the following program and try to measure the amount of time it takes to run. (A good measurement would require a stop watch, but don't get all that fanatical!)

```
1 FOR J=1 TO 10 STEP 1
2 NEXT J
```

Those with some knowledge of BASIC will realize that the STEP 1 part is unnecessary, but include it anyway for continuity with what will come later.

When the program is done, type PRINT J then ENTER. You may be surprised at the result, but it gives some insight as to how FOR/NEXT loop works.

Next, type in the following program. Please pay careful attention to the number of zeroes.

```
1 FOR J= 10000000 TO 10000010 STEP 1
2 NEXT J
```

RUN the program. Note that making J larger does not make the program run slower. type PRINT J and ENTER to see a result that is not too surprising anymore.

Next type in:

```
1 FOR J = 10000000000 TO 10000000000
10 STEP 1
```

```
2 NEXT J
```

RUN the program and time it. If you get impatient, hit BREAK and then type PRINT J and ENTER to see how far J has gone. No matter how long you wait before hitting BREAK, the result will be the same. You've just run into the brick wall!!

Is J too big? Just in case it's not, let's change something else first. Type in:

```
1 FOR J = 10000000000 TO 10000000010 STEP 2
2 NEXT J
```

This seems to run fine. Perhaps the problem isn't with J!

Let's try something completely different. You don't need a fantastic background mathematics to know that:

The 3's simply cancel each other out. let's do this in a program:

```
1 LET A=1
2 LET B=A
3 LET B=B/3
4 LET B=3*B
5 IF A=B THEN PRINT "EQUAL"
6 IF A is more or less than B THEN
PRINT "NOT EQUAL"
```

Walking through the program, we see that we see that we set A=B=1 in line 1 and 2. In line 3 B becomes 1/3. In line 4, B

becomes 1 again. Therefore, from lines 5 and 6, we'd think that the result should be "EQUAL". Don't make any bets! Try the program out and see for yourself!

It shouldn't what order we do the multiply and divide so let's swap lines 3 and 4 as follows:

```
3 LET B=3*B
4 LET B=B/3
```

First, check to see that the changed program should do the same thing and RUN it. Why does the answer come out different? We've just run into a brick wall again, and though it's the same wall we hit before!

Why does this happen? If I included an explanation here, this article would become a bit cumbersome, but I promise to continue with it next time. In the meantime, think about the problem. Change the programs around. note any "sudden" changes when the numbers you use are powers of two, or almost powers of two! It's good to understand this problem, because it can crop up in many other (not to obvious) ways, and understanding it can save you many hours of head scratching when your "perfect" program just won't work.

Wes Brzozowski  
 SINCUS, March 1984

\*\*\* SCHOENWETTERS SIGNALS \*\*\*

TIPS FROM DAVE SCHOENWETTER

Here are some tips for machine code programming on the TINES-SINCLAIR machines which I have found to be very useful especially when working with the 2K system. all tips will work with the 16K systems too.

(1) I have accidentally deleted my 1 REM statement when editing the BASIC part of my program on many occasions. To eliminate the possibility of deleting your 1 REM statement which contains your machine code program, ENTER 1REM followed by enough characters to hold your MC program. POKE16570,0 which will change 1REM to OREM ! THE PROGRAM WILL NOW LIST and RUN but the 0 REM cannot accidentally be deleted!

(2) With large 1 REM machine code programs on 2K systems to computer often gets into a loop when attempting to edit BASIC. This causes a continuous loop LISTING (or trying to) the 1 REM statement. To prevent this I added a couple of HEX 76's near the beginning of 1 REM text. this prevents a LIST beyond the "Hex 76". One disadvantage is that you must ENTER LIST 2 to see your BASIC program. However it's better than losing your program to the LIST LOOP.

(3) For anyone interested in ENTERING machine code, I wrote a machine code program that loads itself above RAMTOP 2K or 16K and uses 128 bytes of storage. By using four lines of BASIC THE PROGRAM THEN WAITS FOR THE USER TO enter A FOUR DIGIT HEX address. the MC program then PRINTS to the screen 128 bytes of Hex data. The decimal address of the entered Hex address is also printed. The program is then in INPUT mode for Hex data. Any number of bytes may be ENTERed on one line. The character "G" will skip over a byte and move the cursor by one byte. Any incomplete byte or non-valid Hex character (except G) will terminate the program with an error. I will bring a copy of the program to the next meeting.

Dave Schoenwetter  
 SINCUS, March 1984

84,03,02

NOTE:

I have been playing around with the PRINT AT #1;" hello" and have found to clear just the bottom line without scrolling, I put INPUT "": PRINT AT #1;" Good-bye"

You can now create text files with your TASWORD TWO WORD PROCESSOR and send the file to another computer or RBBS with the 2050 MODEM and MTERM SMART II modem program.

The following information was downloaded from COMPU-SERVE and revised by Dave Schoenwetter.

\*\*\* Modifying your Tasword Two for MTERM use \*\*\*

Load your Tasword Two program (with the Bytes, as usual), go to the Menu, and use "b" to exit to BASIC.

1. Machine Code Routine. Starting at Line 9000, enter the following BASIC loader for the machine code:

```
9000 RESTORE : LET ADR=54848
9010 FOR I=ADR TO ADR+62
9020 READ BYTE: POKE I,BYTE
9030 NEXT I
9100 DATA 33,118,92,78,33,119
9101 DATA 92,78,3,33,86
9102 DATA 104,9,34,75,92
9103 DATA 33,87,104,9,34
9104 DATA 89,92,33,102,104
9105 DATA 9,34,99,92,197
9106 DATA 42,8,243,17,86
9107 DATA 104,237,176,33,85
9108 DATA 104,193,22,64,35
9109 DATA 21,32,4,54,13
9110 DATA 22,64,11,120,177
9111 DATA 40,2,24,241,54
9112 DATA 64,201
```

Once you have this typed in and you're sure it's right, enter GO TO 9000. Now you can just DELETE 9000,9112 to get rid of the loader program. Your Bytes are in place.

2. Now you want to modify the BASIC section of TW2. There are three necessary commands you must include:

```
---RANDOMIZE a
---CLEAR 54015
---RANDOMIZE USR 54848
```

I just put these in a convenient place in the program, along with some other lines:

```
5000 REM ** MTERM Formatting **
5010 RANDOMIZE a: CLEAR 54015
5020 You can put some PRINT statements in here,
5030 with some explanatory text, etc.
5040 PRINT "Load your MTERM code now, with" TAB 2;"LOAD
****CODE: PRINT USR 54016"
5100 RANDOMIZE USR 54848
5200 STOP
```

Note: the final STOP command is important. Now, whenever you want to format your text file for the MTERM memory buffer, you can just exit to BASIC and enter GO TO 5000.

3. To make things easier, I have expanded my Menu to include the MTERM formatting option. This is what I did:

```
--Line 25: change VAL "4" to VAL "3"
--Line 60 PRINT : PRINT "format text for MTERM buffer f"
--Line 70: change PRINT AT etc. to PRINT #0;" etc....
--Lines 110 to 170: reduce each of the "LET i=VAL" numbers by one, for example, IF b=VAL"115" THEN LET i=VAL"5"
--Insert Line 175: IF b=VAL "102" THEN LET i= VAL "19"
--Insert Line 670: IF b=VAL "102" THEN GO TO VAL "5000"
```

Since you have moved the Menu around a little, some of the other PRINT AT statements around the program won't quite line up.

```
--Line 800: just use RETURN (get rid of the junk).
--Line 900: PRINT AT VAL "7", VAL "0";"Rewind and play the tape to verify" a$: RETURN
```

There may be some others, too; you'll find them. In my program I have used a lot of PAPER, INVERSE, etc. That part is up to you.

4. Once you have all your BASIC modifications in place, enter RUN. Go to the Menu and use "t" to save your new program and bytes to tape.

5. Instructions for Use. You can use your modified TW2 program (I call it TasTerm) just like ordinary TW2, for editing, saving, and printing text. There are just a few things to remember:

--If you intend to upload your text file via MTERM, you must leave the column 64 blank. The machine code inserts an ENTER character at this position, so whatever you put there will be lost. When you begin, just hit Cursor Down once, Cursor Left twice, and use Ext. Mode "D" to set the margin. Use Sys. Shift "AT" to get back to the beginning, and you're set.

--Don't load anything into the program that will overwrite the first Help Page. As you can see, the m/c resides on that (formerly) blank line and you don't want to lose it.

--Once you use the formatting option, your BASIC program will be lost, so you can't go back to TW2. Just enter

```
LOAD "CODE: PRINT USR 54016
```

and load your MTERM program. It will start automatically, and your text will be in the buffer.

--When entering text, I recommend leaving W/W turned ON, and R. Justify turned OFF. You don't want to insert a lot of odd spaces that won't make any sense to whomever reads your uploaded text.

--When uploading the text, it will scroll out in 63-character lines, even if the whole line is blank. That's just the way TW2 stores text. You will see a "@" signal at the end of your file. (You'll probably want to delete the "@" signal after it comes out.)

I think that's all there is to it. If you have any questions or suggestions for improvements, I would be very glad to receive them.

David Prinitis  
[74756,164]  
TASTE.RM 26-JUL-85 6625

end of COMPU-SERVE download file.

\*\*\*\*\* CHANGES TO ALLOW 64 TASWORD FILES \*\*\*\*\*

I used the above procedure and found it to work perfectly, however I did not want to be limited to 63 columns so I revised the code somewhat to allow the full 64 column capabilities of the TASWORD TWO program. The only change necessary is the DATA statements. Use all other procedures listed above.

\*\*\*\*\* REVISED FOR 64 COLUMN \*\*\*\*\*

```
9000 RESTORE : LET ADR=54848
9010 FOR I=ADR TO ADR+48
9020 READ BYTE: POKE I,BYTE
9030 NEXT I
9100 DATA 237,75,118,92,42,8,243,17,86,104
9101 DATA 62,64,237,160,226,90,214,61,32,248
9102 DATA 62,13,18,19,24,240,62,13,18,19,237
9103 DATA 83,75,92,19,237,83,89,92,1,15,0
9104 DATA 235,9,34,99,92,201
```

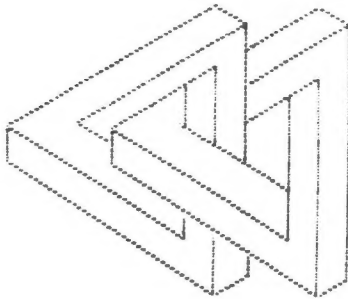
- Total of 48 entries -

Dave Schoenwetter  
1335 Farm to Market Rd.  
Endwell, New York 13760  
(607) 748-9687

end of list



My Favorite Triangle



THANKS GARY-FROM ALL OF US HERE LOCALLY AND AS EVIDENT OF THE MANY KIND WORDS FROM READERS AND OTHER USER GROUPS, THANKS FROM YOUR READERS- YOU DID ONE HELLAVA JOB! TWO YEARS THIS PAST APRIL YOU TOOK THE EDITOR'S JOB AND GAVE THE SOCIETY THE GLUE THAT HAS HELD IT TOGETHER...THE HOURS, THE SKILL AND THE DEVOTION AND STYLE NOT TO MENTION THE OUT OF POCKET COSTS FOR THE MILLION LITTLE ODDS AND ENDS...THANKS; and to all the corresponding members, we here locally got a little something for Gary, and when he finds out, we'll tell you, not to let the cat outa the bag yet.

Thanks Gary !

```

1 REM Copied and adapted from
"the PLOTTER"
100 REM "my favorite triangle"
by D.F.U.
0 REM Sept 1985 modified by P
AH, SINCUS
5 FOR a=1 TO 29
10 READ X,Y,X1,Y1
13 PLOT X,Y: DRAW X1,Y1
15 NEXT a
17 PAUSE 0: CLS
18 RESTORE 100: FOR a=1 TO 29
READ X,Y,X1,Y1:
25 LET X=X-25: LET Y=Y+20
30 PLOT X,Y: DRAW X1,Y1: NEXT
a
50 PRINT "my Favorite Triangle"
100 DATA 48,88,0,-12,48,76,84,-
42
110 DATA 48,88,72,-36,48,88,84,
42
115 DATA 132,130,12,-8,144,124,
0,-10
120 DATA 144,124,-36,-34,76,90,
10,-10
130 DATA 134,34,12,8,146,40,0,8
135 DATA 132,34,0,18,130,52,0,0
140 DATA 90,88,0,-12,90,76,84,-
42
160 DATA 90,88,72,-36,90,88,42,
21
170 DATA 174,130,12,-8,186,124,
0,-10
180 DATA 174,130,-10,-15,174,10
0,-30,-15
190 DATA 166,124,-40,-20,118,90
44,-20
200 DATA 176,34,10,6,166,38,0,8
4
210 DATA 174,34,0,72,162,52,0,4
0
220 DATA 182,84,0,24,180,90,0,1
0
230 DATA 144,78,0,10

```

Thanks to CCATS and the PLOTTER

```

5 REM decbi6line
10 INPUT L
20 POKE 85376,L
30 PRINT "BIN ";
40 FOR m=0 TO 7
50 PRINT POINT (m,175);
60 NEXT m
70 PRINT " = ";L;" DEC"
80 PAUSE 0: CLS : GO TO 10

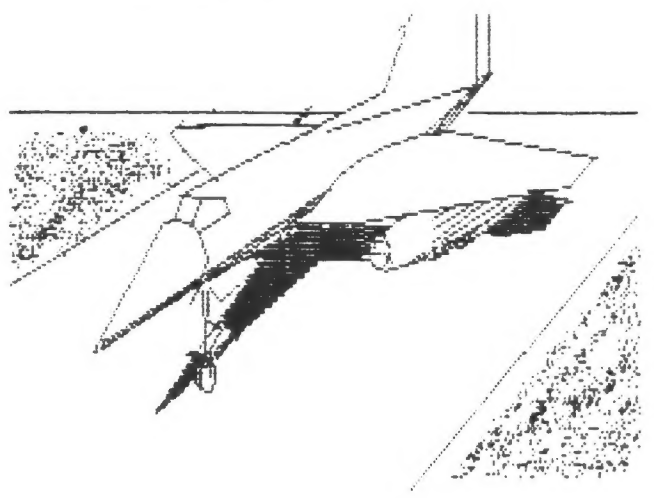
1 REM in the above 6line prog
ram <ENTER> any number from 0 to
255 for binary readout.
2 REM in the following 3 line
program <ENTER> "BIN 10101010"
to get the decimal readout.
5 REM bidec3line
10 INPUT a$: REM BIN
20 PRINT a$;" = ";VAL a$;" DEC

50 REM both of the above
programs are by
Stanley Livingston, SINCUS,
Johnson City, NY!!

```

Thanks to Stanley Livingston, SINCUS Johnson City, NY

"Art" from ARTWORX see page 3 for review.





for the  
**MTERM Smart II**

This nifty little program which can be loaded into the MTERM Smart II program features an automatic re-dialing utility. Once in Smart II, simply exit to the BASIC mode and load this utility program. Press RUN and then enter the phone number to be dialed. The program will continue to dial the phone number until a connection is made (or you can BREAK into the program at any time). Once connection is made, transfer to the terminal mode is made by pressing <ENTER>.

The program is from the public domain data library of the Tinx sub-board of the Average Remote BBS (213) 325-0213 in Torrance, California.

Steve Ishii  
 Corresponding SINCUS member  
 Cerritos, CA

```

1 INPUT "PHONE NUMBER?";a#
2 CLS
15 OUT 119,31
18 PAUSE 30
19 PRINT AT 10,0; FLASH 1;"DIA
LING "; FLASH 0;a#
20 FOR i=1 TO LEN a#
30 LET a=VAL a$(i)
32 IF a=0 THEN LET a=10
35 PAUSE 32
40 GO SUB 60
50 NEXT i
55 GO TO 150
60 FOR d=1 TO a
70 FOR e=3 TO 4
80 OUT 119,e
90 PAUSE 2.5
100 NEXT e
110 OUT 119,1
120 OUT 119,2
130 NEXT d
140 RETURN
150 FOR i=1 TO 2000
165 IF IN 119=133 THEN CLS : PR
INT FLASH 1;"C O N N E C T E D !
!"; GO TO 200
168 NEXT i
170 OUT 119,0
175 PAUSE 100
180 GO TO 3
200 FOR i=1 TO 10: BEEP .05,13:
NEXT i
210 LET g#=INKEY#: PRINT AT 10,
0; FLASH 1;"Hit <ENTER> to start
MTERM"
215 IF g#=CHR# 13 THEN GO TO 22
0
220 GO TO 200
230 POKE 61157,24: POKE 61153,6
234 POKE 61170,184: POKE 61172,
134
240 FOR i=61193 TO 61211: READ
m: POKE i,m: NEXT i
250 FOR i=61311 TO 61331: POKE
i,32: NEXT i
260 POKE 61599,21
280 OUT 119,34: PRINT USR 54016
300 DATA 254,147,27,95,254,147,
27,95,234,248,50,193,154,89,193,
247,105,105,121,195
    
```

From the PLOTTER-Clatsop County (Oregon) Area T/S Users Group CCATS.. 'Sinclair Research has not sold out after all. According to reports, Sir Clive is still in charge and thanks to a huge order from a large department store chain in England, (20 million pounds over a period of time) the company may pull through. With the US market about to be hit with a big ad campaign, the company may yet make a comeback. Lets hope so, Sir Clive has given us all a lot to thank him for.'

**Recent ads dept.**

From Ramex Int'l, 17620 26 Mile Road, Washington, MI 48094, tele: (313) 781-5800 9am to 6pm (EST)  
 Tasword 2-\$14.95, Tasman Interface -\$57.60, Omnicalc 2-\$21.60, ARTWORX -19.95, (this is the one reviewed in this newsletter-it is THE best!!) Trivia 2000 - 14.50, TAS-Math-\$15.95, Millennia K w/1 Drive-\$399.w/2 Drives-\$529; Panasonic 1090 Printer -\$289 (this newsletter was done on the 1090) and more write for details-sale is extended to 10-31-85 so hurry!

From Knighted Computers, 707 Highland St Fulton, NY 13069 (315) 593-8219 just mailed their latest sale prices out I didn't notice any end of sale date-so I'll mention a couple items that caught my interest-Machine Code Tutor-\$18.50, this is supposed to help you learn MC, well I may order this one, as I still dont understand it!-if and when I get it I'll review it in the upcoming months. Night gunner- and Fighter Pilot are 16.95 each (these are really good!!) a speech synthesizer for the TS2068-\$16.95 and Trashman \$11.95, Travels with Trashman-11.95, Omnicalc 2-19.50 plus more. write or call for more details.

*Note: sales tax and shipping charges in addition to prices stated-tell 'em you read of their business in SINCUS NEWS and we could use the advertising-as these are just published for our readers information. THANK YOU*

Look for more by Wes Brzozowski in SINCUS NEWS next issue. After reviewing for the nth time the articles and info in this letter, understand that some was written in July 1985, and some even earlier and undated and unsigned. I tried out the 3 and 6 line binary to dec programs and they didnt work!! But after getting together with Stan, the author, they did indeed work. My TS2068 must be developing a problem, I can't figure it out-the programs only work from tape out of Stan's machine into mine, but the tape of the same program from my 2068 WILL run on Stan's! Yet it will not work on mine if just keyed in...talk about touchy, till the next issue, keep on computen.

Paul Hill  
 Editor, SINCUS NEWS

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Due to lack of time several programs submitted to SINCUS NEWS have not been tried out.